



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,816	11/09/2001	Carl B. Frankel	5681-03600	3589

7590 07/19/2005

Lawrence J. Merkel
Conley, Rose, & Tayon, P.C.
P.O. Box 398
Austin, TX 78767

EXAMINER

SILVER, DAVID

ART UNIT	PAPER NUMBER
----------	--------------

2128

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/007,816	Applicant(s) FRANKEL ET AL.	
	Examiner David Silver	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/26/02, 4/07/05</u> . | 6) <input type="checkbox"/> Other: ____. |

P

DETAILED ACTION

Claims 1-37 are pending.

Claim Objections

1. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

c. As per claim 19, the claim discloses that the instructions are to be executed by the first node; however, the examiner finds that according to claim 13 the instructions are already to be executed by the first node.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-19, and 31-37 are rejected under 35 U.S.C. 101 because the claimed invention is drawn to non-statutory subject-matter.

a. Specifically, claims 1-19 and 31-37 are not technologically embodied since claims have not recited any limitations relating to a practical application in the technological arts and have merely claimed software (node) and non-tangibly embodied (carrier medium) content. The examiner therefore submits that the

application has not recited any limitations that provide a tangible result and have merely claimed software and non-tangibly embodied content.

b. Specifically, claims 1-19 are not limited to tangible embodiments. In view of Applicant's disclosure, specification page 2, column 1, line 9, the node is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., hardware) and intangible embodiments (e.g., software). As such, the claim is not limited to statutory subject matter and is therefore non-statutory. The specifications state "Generally, a node is the hardware and software resources for: (i) simulating a component of the system under test; or (ii) running a test program or other code (e.g. the hub) for controlling or monitoring the simulation." The word "generally" suggests to the examiner that a node may be defined to be software alone; thus, it is non-statutory subject matter. The examiner respectfully suggests that claim 1 be further limited by having a physical embodiment. MPEP 2106 reads as follows (emphasis added):

"A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan (discussed in i) below), or (B) be limited to a practical application within the technological arts (discussed in ii) below). See Diamond ?.

Diehr. 450 U.S. at 183-84, 209 USPQ at 6 (quoting *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1877))

c. Specifically, claims 31-37 are not limited to tangible embodiments. In view of Applicant's disclosure, specification page 7, column 1, paragraph 7, the carrier medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., CD-ROM and disk) and intangible embodiments (e.g., electrical signals, electromagnetic signals, or digital signals). As such, the claim is not limited to statutory subject matter and is therefore non-statutory. The examiner respectfully suggests that claim 31 be further limited to tangible computer readable medium.

Section 2106 [R-2] (Patentable Subject Matter – Computer-Related Inventions) of the MPEP recites the following:

“Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760.”

The examiner therefore submits that Applicant's have not recited any limitations that provide a tangible embodiment and have merely claimed software and carrier signal, that are not tangibly embodied.

An invention which is eligible for patenting under 35 U.S.C 101 is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, **tangible**, and useful result.

"Tangible" – Applying *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether

- i. there is simply software which is not tangibly embodied in a matter so as to be executed;
- ii. there is simply intangible media such as signals, carrier waves, transmission waves or other media incapable of being touched or perceived absent of tangible medium through which they are conveyed.

The examiner respectfully submits, under current PTO practice, that the claimed invention does not recite a tangible embodiment and is merely drawn to software and intangible media.

Information Disclosure Statement

2. The information disclosure statement filed 2/13/2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

3. The information disclosure statement (IDS) submitted on 4/4/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Interpretation

For clarification of claim 13, the examiner interprets the said claim to mean the following:

An apparatus containing a node simulating a portion of a system under test and a set of instructions. Instructions such that when executed will read stimulus/input data that was provided to a node in a previous simulation. And, instructions such that when executed read the previous simulation's output data and compare the said output data with the output data generated by the current simulation. The said stimulus/input previous simulation's output data being read from a log. The said previous simulation being performed on a node.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1, 20 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Damani et al (<http://ieeexplore.ieee.org/search/wrapper.jsp?arnumber=685268>).

d. As per claim 1, Damani discloses a distributed simulation system comprising:

- i. a plurality of nodes arranged to perform a simulation of a system under test (section 1, paragraph 1, lines 1-5),
- ii. wherein the plurality of nodes are configured to communicate simulation commands and signal values for the system under test using message packets transmitted between the plurality of nodes (section 3, lines 4-6),
- iii. and at least one of the plurality of nodes is configured to log the message packets in one or more log files during the simulation (section 2, paragraph 2, lines 1-5).

Network communication is performed through sending message packet.

Because message packets are the “fundamental unit of information carriage in all modern computer networks”

(<http://en.wikipedia.org/wiki/Packet>), the examiner asserts that Damani teaches of communicating through message packets. Damani additionally discloses that such message packets will be used to transmit simulation commands (events) and signal values (events containing signal values). Additionally, it would have been obvious to one of ordinary skill in the art that simulation commands and signal values for the system under test should be transmitted between the plurality of nodes (Application, page 2, lines 3-6.)

Art Unit: 2128

- d. As per claims 20 and 31, the claims differ only in statutory basis: claims 20 and 31 are the process for the manufacture of claim 1; thus, are also rejected under same reasoning as claim 1.
6. Claims 1, 6-12, 20-21, and 25-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Ulrich et al (US Patent 5,466,200).

a. As per claim 1, Ulrich discloses a distributed simulation system comprising:

- i. a plurality of nodes arranged to perform a simulation of a system under test (column 2, lines 8-15 and lines 26-30),
- ii. wherein the plurality of nodes are configured to communicate simulation commands and signal values for the system under test using message packets transmitted between the plurality of nodes (column 2: lines 8-15 and lines 26-30, column 10: lines 26-29),
- iii. and at least one of the plurality of nodes is configured to log the message packets in one or more log files during the simulation (column 3: lines 45-49, column 8: lines 27-28).

The examiner asserts that according to current claim communication the log file can reside in memory. Message packets must be stored in memory to access the CPU and be processed. Thus, is it inherent that the message packets are logged in memory.

b. As per claim 6, Ulrich discloses a distributed simulation system as recited in claim 1 wherein

iv. the node logging the message packets is a hub of the distributed simulation system (column 3: lines 45-49, column 8: lines 27).

The examiner asserts that according to current claim limitations the log file can reside in computer memory. Thus, when the hub mentioned by Ulrich sends information to –or– receives information from other nodes, the hub writes the information to memory and hence is using a memory log file.

Therefore, the hub of the distributed simulation system is logging the message packets.

e. As per claim 7, Ulrich discloses a distributed simulation system as recited in claim 1 wherein

iv. the hub logs each message packet transmitted in the distributed simulation system in one or more log files (column 3, lines 45-49).

The examiner asserts that in order for information to be transmitted between two nodes, as described by Ulrich, that information would inherently be transmitted through packets, the fundamental carriage unit.

The examiner asserts that according to current claim limitations the log file can reside in computer memory. Thus, when the hub mentioned by Ulrich sends information to –or– receives information from other nodes, the hub writes the information to memory and hence is using a memory log file.

Therefore, the hub of the distributed simulation system is logging the message packets.

f. As per claim 8, Ulrich discloses a distributed simulation system as recited in claim 1 wherein

v. each of the plurality of nodes is configured to log message packets in a respective one of the log files (column 8, lines 27-28).

The examiner asserts that according to current claim limitations the log file can reside in computer memory.

g. As per claim 9, Ulrich discloses a distributed simulation system as recited in claim 8 wherein

vi. the respective one of the one or more log files contains only the message packets received by the corresponding node of the plurality of nodes and the message packets transmitted to the corresponding node (column 8, lines 27-28).

The examiner asserts that according to current claim limitations the log file can reside in computer memory.

h. As per claim 10, Ulrich discloses a distributed simulation system as recited in claim 1 wherein

vii. the node logging message packets is a distributed control node (column 8, lines 27-28).

The examiner asserts that according to current claim limitations the log file can reside in computer memory.

i. As per claim 11, Ulrich discloses a distributed simulation system as recited in claim 10 wherein

viii. one of the plurality of nodes is a hub, and wherein (column 3, lines 45-57; column 3, lines 50-53).

ix. the hub is configured to route message packets to the distributed control node even if the message packets are not otherwise destined for the distributed control node (column 3, lines 45-50; column 8, lines 27-28).

The hub within Ulrich's distributed simulation system broadcasts the messages packets received from the nodes and sent to the hub. The message packets are not destined for the distributed simulation node (hub); hence, Ulrich anticipates this claim.

j. As per claim 12, Ulrich discloses a distributed simulation system as recited in claim 11 wherein

x. the distributed control node logs each message packet transmitted in the distributed simulation system in the one or more log files (column 8, lines 27-28).

The examiner asserts that according to current claim limitations the log file can reside in computer memory.

j. As per claims 20 and 31, the claims differ only in statutory basis: claims 20 and 31 are the process for the manufacture of claim 1; thus, are also rejected under same reasoning as claim 1.

k. As per claim 21, the claim differs only in statutory basis: claim 21 is the process for the manufacture of claim 2; thus, is also rejected under same reasoning as claim 2.

Art Unit: 2128

- l. As per claim 25, the claim differs only in statutory basis: claim 25 is the process for the manufacture of claim 6; thus is also rejected under same reasoning as claim 6.
 - m. As per claim 26, the claim differs only in statutory basis: claim 26 is the process for the manufacture of claim 8; thus is also rejected under same reasoning as claim 8.
 - n. As per claim 27, the claim differs only in statutory basis: claim 27 is the process for the manufacture of claim 10; thus is also rejected under same reasoning as claim 10.
 - o. As per claim 28, the claim differs only in statutory basis: claim 28 is the process for the manufacture of claim 11; thus is also rejected under same reasoning as claim 11.
 - p. As per claims 29 and 30, the claims differ only in statutory basis: claims 29 and 30 are the process for the manufacture of claims 13; thus are also rejected under same reasoning as claim 13.
4. Claims 13-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Robbins et al (US Patent 5,973,638).
- a. As per claim 13, Robbins discloses an apparatus comprising:
 - i. a first node configured to simulate a portion of a system under test (column 19, lines 11-14)
 - ii. and instructions which, when executed, read first message packets from a log file, wherein the first message packets were transmitted to a

node simulating the portion in a preceding simulation (column 19, lines 32-40)

iii. and wherein the instructions, when executed, transmit the first message packets to the first node during the simulation (column 19, lines 37-40)

iv. and wherein the instructions, when executed, read second message packets from the log file, wherein the second message packets were sourced by the node simulating the portion in the preceding simulation (column 18: lines 59-67, column 19: lines 1-15),

v. and wherein the instructions, when executed, verify that the first node sources corresponding message packets during the simulation (column 19, lines 37-40).

The examiner asserts that the reference output by Robbins may have been obtained through prior simulation.

It is inherent that in order for instructions, as well as the data to be executed upon, to be executed or manipulated, they must first be read into memory. Further, for such reading of the log to occur there must be an execution of computer instructions. The examiner asserts that Applicant's mentioned "first message packets" are the equivalent of Robbins' test signals. These test signals are generated from the preceding simulation by the simulator.

b. As per claim 14, Robbins discloses an apparatus as recited in claim 13

wherein

- i. the log file contains only the first message packets and the second message packets (column 18: lines 59-67, column 19: lines 1-15, column 19, lines 37-40).

It is implied by Robbins that there is only a need for the stimuli (first message packets) and reference output (second message packets).

Hence, Robbins disclosed claim 14.

e. As per claim 15, Robbins discloses an apparatus as recited in claim 13

wherein

- i. the log file contains each message packet transmitted in the preceding simulation (column 19, lines 37-40).

The examiner asserts that disclosed the reference signal (second message packets) may have been obtained through the use of prior simulation/modeling as mentioned on column 17 lines 20-25.

f. As per claim 16, Robbins discloses an apparatus as recited in claim 15

wherein

- ii. the instructions, when executed, ignore message packets other than the first message packets and the second message packets in the log file (column 18: lines 59-67, column 19: lines 1-15, column 19, lines 37-40).

It is implied by Robbins that there is only a need for the stimuli (first message packets) and reference output (second message packets).

Robbins' discloses a log containing stimuli and reference output data; it is anticipated that any computer instructions on such log would ignore other information stored within that log, such as metadata.

g. As per claim 17, Robbins discloses an apparatus as recited in claim 13 wherein the simulation excludes other portions of the system under test (column 10, lines 29-32).

h. As per claim 18, Robbins discloses an apparatus as recited in claim 13 wherein

iii. the instructions are executed in a second node coupled to the first node (column 26, line 33-35).

The examiner asserts that the instructions are executed on the smart antenna (second node) coupled with the measuring device (first node).

i. As per claim 19, Robbins discloses an apparatus as recited in claim 13 wherein

iv. the instructions are executed by the first node.

This claim is a subset of claim 13 because it fails to further limit the independent claim. It is rejected under same reasoning as said claim.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claim 2-5, 22, 24, 32-33, and 35-36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Damani et al as applied to the rejection of claim 1 above in view of Smallmo (US Patent 6,289,398 B1)

a. As per claim 2, Damani does not explicitly teach the limitation, if a first node of the plurality of nodes fails during the simulation, the distributed simulation system is configured to establish a second node, and wherein a third

node of the plurality of nodes is configured to read message packets that were transmitted to the first node from the log file and to transmit the message packets to the second node. However, Smallmo teaches that data logged/stored on a failed node shall be rebuild on a spare new node, wherein such new node will replace the failed node (column 15, lines 52-56). Therefore, it would have been obvious to one of ordinary skill in the art to build a distributed computing environment such as that taught by Damani with the mentioned attributes. Smallmo's teachings would have allowed users of Damani's system to enjoy increased stability, fault-tolerance and availability of the distributed network.

b. As per claim 3, Damani discloses a distributed simulation system as recited in claim 2 wherein

- i. the distributed simulation system is configured to pause the simulation prior to transmitting the message packets to the second node (section 1, lines 1-5),
- ii. and wherein one of the plurality of nodes is configured to resume the simulation subsequent to transmitting the message packets from the log file to the second node (section 1, column 2, lines 23-26).

Damani teaches that at the time of the failure the system will: halt/pause, recover from the failure, then restart/resume operations.

c. As per claim 4, Smallmo teaches of a distributed system wherein a warm spare, second node, is configured to detect data, message packets, in a log file which were sourced by a failed device, first node, wherein the warm spare is

further configured to verify that the warm spare transmits the failed device's message packets (column 15: lines 65-67, column 16: lines 1-14, lines 16-22).

d. As per claim 5, Damani disclose a distributed simulation system as recited in claim 2 wherein

iii. the second node is configured to load a simulator state corresponding to a simulation checkpoint (section 2, paragraph 2, lines 3-5),

iv. and wherein the third node is configured to transmit, to the second node, message packets that were transmitted to the first node if the message packets occurred after the simulation checkpoint (section 2, paragraph 2, lines 3-5),

v. and wherein the third node is configured not to transmit, to the second node, message packets that were transmitted to the first node if the message packets occurred prior to the simulation check point (section 2, paragraph 2, lines 3-5).

e. As per claim 22, the claim differs only in statutory basis: claim 22 is the process of the manufacture of claim 3; thus is also rejected under same reasoning as claim 3.

f. As per claims 23, 34 and 37 the claims differ only in statutory basis: claims 23, 34 and 37 are the process for the manufacture of claim 5; thus, is also rejected under same reasoning as claim 4.

Art Unit: 2128

g. As per claims 24, 35 and 36, the claims differ only in statutory basis: claims 24, 35 and 36 are the process for the manufacture of claim 5; thus, is also rejected under same reasoning as claim 5.

h. As per claim 32, this claim differs only in statutory basis: claim 32 is the process for the manufacture of claim 2; thus, is also rejected under same reasoning as claim 2.

i. As per claim 33, this claim differs only in statutory basis: claim 33 is the process for the manufacture of claim 3; thus, is also rejected under same reasoning as claim 3.

Claims 1-37 are rejected.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reference C is cited as disclosing a simulator using breakpoints for the purpose of faster debugging.

Reference E is cited as disclosing a plurality of nodes simulating a telecommunications network.

Reference F is cited as disclosing a physical circuit simulator with external input and data and logic state preservation.

Reference G is cited as disclosing a distributed simulation system with synchronized node communication.

Reference H is cited as disclosing a caching/logging of data and rollback/consistency maintenance said data.

Reference I is cited as disclosing a distributed simulation system with rollback capabilities.

Reference V is cited as teaching of a simulation system having Time Warp and rollback capabilities.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Silver whose telephone number is (571) 272-8634. The examiner can normally be reached on Monday thru Friday, 8am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached on (571) 272-3780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Silver
Examiner
Art Unit 2128


JEAN R. HOMERE
PRIMARY EXAMINER